

THE GENUS OPHIDERMA FAIRM.
(MEMBRACIDÆ: HOMOPTERA.)¹

BY EDMUND H. GIBSON AND EMMA WELLS,

WASHINGTON, D. C.

The genus *Ophiderma* was described by Fairmaire² to include his *salamandra*. In its distribution it is limited to North America, and includes ten species, two of which are here described as new. The genus may be characterized as follows: Pronotum greatly depressed; transversely broadly rounded; dorsal outline almost rectilinear, apex generally surpassing the tip of the abdomen; surface coarsely punctured, in most of the species pilose; without suprahumeral horns. Head short and broad. Elytra hyaline, becoming more or less smoky or brown at apex; base of corium with three contiguous nervures; four basal and two discoidal areoles; terminal areole triangular, petiolate, the adjacent contiguous before it.

Ophiderma is closely allied to several other genera, namely, *Vanduzsea* Godg., *Idioderma* Van D., and *Carynota* Fitch, but may be separated from them by having the base of the corium with three contiguous veins and the terminal areole of the wing triangular.

KEY TO THE SPECIES.

1. Dorsal line straight or a little depressed; terminal areole of the elytra triangular at base 2.
Dorsal line somewhat elevated posteriorly, but not at all compressed, behind with a slight sinus; terminal areole of elytra distinctly obtusely angled on its basal line **nigrocincta** Van D.
2. Color a uniform yellow or green 3.
Color light or dark brown or black, more or less marked with yellow .. 4.
3. Pronotum short, slender; eight black spots on face and black crescent over eye **pallida** Van D.
Larger species; pronotum long, wide; face immaculate **flava** Godg.
4. Dark brown species with distinct broad yellow band more or less straight on margin of pronotum, male with transverse apical band.
flavicephala Godg.

¹ Contributions from the U. S. Bureau of Entomology.

² Annales de la Societe Entomologique de France, 2e Serie, tome IV, p. 493, 1846.

- Greyish brown species without broad yellow band on margin of pronotum. 5.
5. Margins of cheeks not strongly sinuated; lateral margin of metopidium rounded above humerals, when viewed from front .. **pubescens** Emm.
 Margins of cheeks strongly sinuated; lateral margin of metopidium straight above humerals, when viewed from front 6.
6. Clypeus distinctly produced beyond line of face; species small.
compacta n. sp.
- Clypeus not distinctly produced beyond line of cheeks; species larger .. 7.
7. Face and metopidium bright yellow, marked with black; longitudinal and apical bands of pronotum yellow **fraterna** n. sp.
 Markings as above white 8.
8. Species large; last ventral segment of female broadly sinuate.
salamandra Fairm.
- Species smaller; last ventral segment of female not so broadly sinuate.
flaviguttula Godg.

Ophiderma salamandra Fairm.

Ophiderma salamandra Fairm., Ann. Soc. Ent. Fr., ser. 2, Vol. IV, p. 493. 1846.

This is the largest species in the genus. The female is lighter brown than male, pale markings sometimes very indistinct in female but usually very clear in male. Head is very broad which helps to distinguish it from *O. flaviguttula* Godg. Margins of the cheeks strongly sinuate. It is known to feed on *Quercus virginiana* in Texas. Its range includes the entire eastern half of the United States.

Ophiderma flaviguttula Godg.

Ophiderma flaviguttula Godg., Bull. Ill. Lab. Nat. Hist., Vol. III, p. 439, 1894.

Distinctly smaller than *salamandra* Fairm. to which it is most closely allied. The species is supposed to occur everywhere east of the Rocky Mountains.

Ophiderma pubescens Emm.

Ophiderma pubescens Emmons, Nat. Hist. N. Y. Agri. of N. Y., Vol. V, p. 157, 1854.

Generally lighter and smaller than *salamandra* Fairm. Other characters given in the key will separate this species from *salamandra*. It has practically the same distribution as the preceding species. Found on *Quercus* sp.

Ophiderma fraterna new species.

Head broad, triangular, bright yellow, eyes prominent; ocelli brown, equidistant from each other and the eyes. Clypeus broad only slightly if at all produced beyond line of cheeks; longitudinal lines of clypeus brown or black; two minute points on base of vertex of head above ocelli; callosities black. Lateral margin of metopidium straight above humerals when viewed from front. Median carina smooth; pronotum densely punctate; on each side of prothorax a bright yellow band continuing from front of metopidium to two thirds length of pronotum and enclosing an oblong dark area; band becomes broader when it attains lower margin of pronotum. Apical transverse band of same color near apex of pronotum. Tegmina with large brown area at base and brown at apex, elsewhere clear. Abdomen dark brown or black, with yellow on edges of segments, tip light brown; femora, tibiae and tarsi yellow. Length 7 mm.

Described from three male specimens in collection of U. S. National Museum from Illinois, New York and Florida.

This species may be readily separated from *O. salamandra* Fairm. by the bright yellow markings on the pronotum.

Ophiderma nigrocincta Van D.

Ophiderma nigrocincta Van D., Bull. Buffalo Soc. Nat. Sci., Vol. IX, p. 101, 1908.

There is one male specimen in the collection of the U. S. National Museum from Arizona which in general answers quite well the original description made from one female taken in Colorado. This specimen is marked on the pronotum with three transverse white bands, the middle one being broad and extending through elytra and abdomen. The callosities of male are the same color as face. Clypeus prominently produced. This is a small species.

Ophiderma compacta new species.

Head grayish brown; clypeus broad, distinctly produced beyond line of face, longitudinal lines of brown; ocelli equidistant from each other and from eyes; two black spots on base of vertex of head; eyes brown or black; callosities black becoming rufous in older specimens. Median carina smooth; prothorax gray or grayish brown becoming lighter just beyond middle toward apex being transversed by a white band; apical half brown with white transverse apical band more distinct in male than in female. Pronotum hairy, broad extending beyond abdomen and almost to the apex of tegmina in female. Elytra brown at base and apex, elsewhere clear. Abdomen dark brown or black in male, lighter in female. Feet and legs black or brown with lighter markings. Length 5-5½ mm. Male smaller and generally darker than female.

Described from three males and three females from Arizona in the U. S. National Museum collection. One of the females is quite yellow but it is probably an older specimen.

Ophiderma flavicephala Godg.

Ophiderma flavicephala Godg., Bull. Ill. St. Lab. Nat. Hist., Vol. III, p. 439, 1894.

The broad light yellow stripe more or less straight on lower margin of pronotum extending from front angles nearly two thirds distance to the apex, separates this from all other species. The color is chestnut brown in females becoming darker in males. The pronotum of male is marked with a transverse apical band of light.

This, like most of the other species in this group has a wide distribution, occurring throughout the entire United States east of Rocky Mountains. It has been found on oak (*Quercus* sp.) and wild indigo (*Baptisia* sp.).

Ophiderma flava Godg.

Ophiderma flava Godg., Bull. Ill. St. Lab. Nat. Hist., Vol. III, p. 439, 1894.

Membracis inornata Say, Say's Ent., Vol. II, p. 378, 1824.

Ophiderma inornata Prov. Le Naturaliste Can., Vol. XX, No. 5, 1890.

Easily recognized by its green or in dried specimens, yellow color. Elytra hyaline, darker at apex. This is a stout species with broad pronotum almost attaining apex of tegmina. Clypeus short, broad, produced a little beyond line of cheeks, rounded on basal line. Face immaculate; callosities of a deeper shade of yellow.

The distribution of this species covers the entire United States east of Rocky Mountains. Oak has been recorded as its food plant.

Ophiderma pallida Van D.

Ophiderma pallida Van D., Bull. Buffalo Soc. Nat. Sci., Vol. IX, p. 101, 1908.

In this species the posterior process of pronotum is acutely narrowed at apex and little surpassing the tip of abdomen. Elytra quite large and long in comparison with rest of structure. Margins of face more or less outlined with black; pronotum a clear pale yellow; callosities and longitudinal lines of clypeus black. Species found in Arizona.

Ophiderma mus Champ.

Ophiderma mus Champ., Biol. Cent. Amer. Hom., Vol. II, pt. I, p. 143.

This species in nature is unknown to the authors; who by original description and illustration suspicion that it either belongs to another genus or a new genus must be erected for it. However until specimens can be studied it is thought best to retain it in *Ophiderma*.

SONORAN CICADAS COLLECTED BY HARRY H. KNIGHT, DR. JOSEPH BEQUAERT AND OTHERS, WITH DESCRIPTIONS OF NEW SPECIES.

BY WM. T. DAVIS,

NEW BRIGHTON, STATEN ISLAND, N. Y.

Mr. Harry H. Knight and Dr. Joseph Bequaert were members of the Cornell University Biological Expedition, organized by Prof. J. Chester Bradley, that started by automobile from Ithaca, New York, in May, and reached California in August, 1917. Both of these gentlemen collected what cicadas they were able to find as the journey progressed, and have kindly turned them over to me. They form an interesting collection and I have been unable to identify two of them with descriptions of species mentioned in *Biologia Centrali-Americana*, or previously known from the United States. These are here described as new, together with two others from the same general region that I have from other sources. A new *Okanagana* from California is also described.

Of the fourteen species here placed in the genus *Tibicen*, only the first seven, in the opinion of the author, really belong there. In the remaining seven the uncus is wish-bone shaped instead of simple, and the first cross vein of the fore wing does not, as a rule, start as far back or near to the base of the wing from radius 3, as it does in the species having the simple uncus. The last seven species here referred to, and others of like character, will no doubt in due time be assigned to one of the genera already described, but they do not belong to the genus *Cicada*, where they would fall in Distant's arrangement by the shape of the head, for Mr. Van Duzee has pointed out in the Bulletin